Claims

[c1] 1. An apparatus for processing a document service request originating from a mobile computing device and directed at an output device in communication with the mobile computing device over a first communications channel of the mobile computing device, said apparatus comprising:

a transceiver for responding to a request to establish a second communications channel with the mobile computing device; and

a document server being adapted to communicate with said transceiver to receive over the second communications channel a document service request originating from the mobile computing device; the document service request including a first parameter identifying a document available to the document server and a second parameter identifying a type of output device available over the first communications channel;

wherein the document server transmits to the output device, via the second communications channel established by the mobile computing device, the document rendered in a format suitable for the output device.

[c2] 2. The apparatus according to claim 1, wherein the document server:

locates the document identified by the first parameter of the document service request;

loads a driver corresponding to the type of output device identified by the second parameter of the document service request;

renders the located document using the loaded driver;

stores the rendered document in a print file; and

transmits the print file to the output device via the mobile computing device.

[c3] 3. The apparatus according to claim 1, wherein the document server and the output device have no preexisting communications channel there between.

[c4] 4. The apparatus according to claim 1, wherein the document server prepares the document identified by the first parameter in a format that conforms to at least one format the output device is adapted to process.

[c5] 5. The apparatus according to claim 4, wherein the document server applies one of a document enrichment, translation, conversion, summarization, recommender service to the document before preparing the document in the format suitable for the output device.

[c6] 6. The apparatus according to claim 1, wherein the document server communicates with a file server for retrieving the document.

[c7] 7. The apparatus according to claim 1, wherein the output device is one of a printer, a display, a file server, and a speaker.

[c8] 8. The apparatus according to claim 1, wherein the format suitable for the output device is a device dependent format.

[c9] 9. The apparatus according to claim 1, further comprising means for recording the document service request for accounting purposes at the document server.

[c10] 10. The apparatus according to claim 1, wherein the document service request includes a third parameter identifying one or more document services to apply to the document.

[c11] 11. The apparatus according to claim 10, wherein the document services identified by the third parameter is one of a summarization service, an enrichment service, a recommender service, and a translation service.

[c12] 12. The apparatus according to claim 1, wherein the second communications channel is a wireless communications channel.

[c13] 13. The apparatus according to claim 1, wherein the document server forms part of an input device.

[c14] 14. The apparatus according to claim 13, wherein the input device is an image-recording device.

[c15] 15. The apparatus according to claim 14, wherein the second communications channel is a limited communications channel.

[c16] 16. The apparatus according to claim 1, wherein the second communications channel is an unlimited communications channel.

[c17] 17. The apparatus according to claim 1, wherein the type of output device available is obtained by executing a discovery request at the mobile computing device.

[c18] 18. The apparatus according to claim 1, wherein the type of output device available is obtained using a profile of the output device and confirmed by executing a discovery

request at the mobile computing device.

[c19] 19. The apparatus according to claim 1, wherein the document server and the output device have an inadequate preexisting communications channel there between.

[c20] 20. The apparatus according to claim 1, wherein the second parameter identifying the type of output device available over the first communications channel is a class of service.

[c21] 21. The apparatus according to claim 20, wherein the class of service is wireless printing.

[c22] 22. The apparatus according to claim 1, wherein the first parameter and the second parameter are specified using a name of the document.

[c23] 23. A method for processing a document service request originating from a mobile computing device and directed at an output device in communication with the mobile computing device over a first communications channel of the mobile computing device, said method comprising:
responding to a request to establish a second communications channel with the mobile computing device;
receiving over the second communications channel a document service request originating from the mobile computing device; the document service request including a first parameter identifying a document available to the document server and a second parameter identifying a type of output device available over the first communications channel; and
transmitting to the output device, via the second communications channel established by the mobile computing device, the document rendered in a format suitable for the output device.

[c24] 24. An article of manufacture, comprising:
a storage medium; and
program instructions stored on the storage medium for processing a document service request on a document server having a processor where the document service request originates from a mobile computing device and is directed at an output device in communication with the mobile computing device over a first communications channel of the mobile computing device; the processor in executing the program instructions:

responding to a request to establish a second communications channel with the mobile computing device;

receiving over the second communications channel a document service request originating from the mobile computing device; the document service request including a first parameter identifying a document available to the document server and a second parameter identifying a type of output device available over the first communications channel; and

transmitting to the output device, via the second communications channel established by the mobile computing device, the document rendered in a format suitable for the output device.